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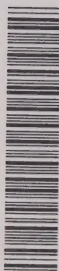
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# EGGS

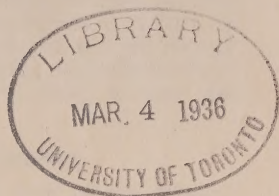
"THE BREAKFAST FOOD OF THE NATION"

THEIR VALUE AS A FOOD  
AND THEIR PLACE IN THE  
CANADIAN DIET—

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DOMINION OF CANADA  
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## SCIENCE APPROVES CULINARY METHODS

In the diet of the Canadian family, varied as it is, there is no food which can be termed a perfect food. It is only by mixing a number of foods, to secure variety and a perfect balance of the essential ingredients, that a proper diet is secured. The art of the blending of foods has been handed down from mother to daughter through generations and for the most part this practical art which was developed long ago has been found to coincide with the scientific knowledge of foods as it exists to-day. Practically every food which is used in preparing the household meals of to-day fills an important and necessary niche of our dietary scheme. It is a significant fact that throughout the civilized world eggs constitute perhaps a greater part of the diet than does any other food of animal origin.

### THE NATURAL FUNCTION OF EGGS

While no food can be termed as perfect from the standpoint of human consumption, it is natural that every food is perfect for the function in which it is used in nature. The grain of corn forms a sheltering coat and a source of nourishment to the corn embryo until it can develop roots and draw its own food from the soil. Similarly, the egg constitutes a perfect supply of food for the developing chick. This fact is of no small significance when it comes to an understanding of the part eggs play in the diet of the nation. The chick commences its development as a small two-celled body. In twenty-one days it has developed to the stage where it can seek an independent existence. Bone, flesh, internal organs and down have been formed. Strength has been supplied to enable the young chick to break from its shell. Just before it hatches the remainder of the yolk is drawn up into the body cavity, to provide nourishment for the chick until it learns to make its own way in the world. It is little wonder that a food which contains such properties should have found a large and important place in the diet of humans.

### THE BREAKFAST FOOD OF THE NATION

Eggs can well claim the title of "The Breakfast Food of the Nation." Prepared in many ways and served in varying quantities they constitute the largest part of the morning meal from coast to coast. Their use, of course, is not limited to any one meal. They are an important part of practically all cooking operations and are served in a variety of ways at other meals. It is important that a food which is as widely used as this should be better understood by cooks and housewives and this pamphlet has been prepared with this object in view.

### EGGS HAVE GREAT FOOD VALUE

There are various body processes to be carried on and various body tissues to be built and maintained by the food which we eat. These numerous functions are carried on by different kinds of food, or by different elements in our foods, and it is in order to secure a uniform supply of the desired ingredients that a varied diet is required. These classes of foods which are needed to properly maintain human life are well known to everyone. They are proteins, carbohydrates, fats, ash or mineral matter and, of later discovery, vitamins. It is interesting to, briefly, study the egg and see how close it comes to meeting human needs in these regards.

Eggs are not a concentrated food. Almost 70 per cent of their total weight is comprised of water. This is slightly more than is found in beef steak, to which food eggs are often compared, and less than is found in milk. Protein forms almost 15 per cent of the egg, and is found largely in the white. The fat



which, on the other hand, is found practically in the yolk alone, constitutes over 10 per cent of the egg. Mineral matter, or ash, makes up 1 per cent of the total. It will be noticed that eggs are deficient in carbohydrates and it is for this reason that they are used so much with foods of vegetable origin. The person who inaugurated the idea of serving toast with the breakfast eggs, or of fried potatoes with fried eggs, did not know the nutritive value of such a combination. Yet now comes science and shows that the wheat and the potato contain the carbohydrates which are desired to round out an egg diet. The volume of vitamins, which have come in for so much discussion of late, in any one food cannot, of course, be determined. It is only known whether a food does or does not possess these substances and it has been definitely established that two at least of the vitamins are found in eggs.

With these facts before him the consumer now asks: What is the newer use of eggs in our dietary system? What is being done to improve the quality and increase the consumption of eggs? In the pages that follow are given further details of the value of eggs and of different ways to prepare them in addition to their recognized use as "The Breakfast Food of the Nation." There follows, too, an outline of the work which is being done by the Canadian Department of Agriculture to grade eggs according to quality and weight, thus to eliminate the element of chance from the buying of eggs and to ensure the consumer of a product on the freshness and quality of which he can depend.

## **PROTEIN IN EGGS**

Eggs are chiefly a protein food, three-fifths of this protein being found in the white and two-fifths in the yolk. Scientifically, the "albumen" or protein of egg white is made up of four types, all important from a nutritive standpoint. It should be remembered that because of the heavy protein content of eggs it is desirable, from a nutritive standpoint, that they be served with foods rich in carbohydrates.

## **RECIPES**

### **EGGS BAKED WITH CHEESE**

Into a buttered baking dish break the required number of eggs. Sprinkle with grated cheese, salt and pepper, and cover with a little cream. Set in a hot oven till whites are set.

### **CREAMED EGGS**

Make a rich white sauce and add chopped hard-boiled eggs.

### **EGGS SUPREME**

Melt two tablespoons butter, add three tablespoons flour, and mix well. Add one and a half cups of milk. Bring to boiling point, stirring constantly. Season to taste, then add one cup chopped beef. Break six eggs into sauce, being careful to keep yolks whole, and poach slowly. This makes six servings.

### **SCRAMBLED EGGS AND PEAS**

Mix the required number of eggs with a little milk. Season with salt and pepper, then add one-half cup of peas. Scramble slowly in buttered pan. Instead of peas, corn, chopped meat, parsley, or green peppers may be used. Also, instead of scrambling, try these recipes as omelets.

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## **MINERALS AND OTHER VALUABLE ELEMENTS IN EGGS**

When one considers that the bone, flesh, and tissue of the chick must be built up entirely from the egg, it is easy to realize the extent to which available minerals must be present in this food. Iron, calcium, magnesium, sodium, nitrogen, phosphorus, sulphur and other essential minerals are present, the

majority, with the exception of calcium chloride (common salt), being in the yolk. Of exceptional importance from a dietary standpoint, is the presence in the egg of a fat-like body known as leathin. Of late this has come to be looked upon as one of the most important of food constituents, as it provides the body with phosphorus in a readily assimilable form. It is interesting, too, to note that because of the presence in rather large quantities of such products as nitrogen and sulphur, eggs are known as an acid food, and that this condition is counteracted by the same form of foods as supply the carbohydrates which the eggs lack.

## RECIPES

### EGG CROQUETTES

6 eggs  
2 tablespoons butter  
1 slice onion  
 $\frac{1}{4}$  cup flour  
1 cup white stock

Salt  
Pepper  
Yolks 3 eggs  
Stale bread crumbs  
Grated cheese.

Poach eggs and dry on a towel. Cook butter with onion three minutes. Add flour and, gradually, stock; cook one minute and cool. Cover eggs with mixture, roll in bread crumbs and cheese, using equal parts, dip in egg, again roll in crumbs, fry in deep fat, and drain on brown paper. These may be served with a thin sauce, using equal parts of white stock and cream, and seasoning with grated cheese, salt and paprika.

### CREAMED EGGS WITH SARDINES

4 tablespoons butter  
 $\frac{1}{4}$  cup soft, stale bread crumbs  
1 cup thin cream or top milk  
2 hard-boiled eggs

1 half-box sardines  
 $\frac{1}{4}$  teaspoon salt  
 $\frac{1}{4}$  teaspoon paprika  
 $\frac{1}{8}$  teaspoon pepper.

Melt butter, add bread crumbs and cream, and bring to the boiling point; then add eggs, finely chopped, sardines freed from skin and bones, and seasonings. Again bring to the boiling point and serve at once.

## VITAMINS IN EGGS

Vitamins or food hormones have not so far been isolated in the pure form, or at least no announcement of such isolation has yet been made, so we do not know from a chemical standpoint just what they are. We do know positively, however, that these vitamins exist and that definitely there are four of them—there are probably more.

It has been absolutely proven that vitamins are essential factors in the diet, as without an adequate supply of these growth and development will be retarded, deficiency disease will be set up, with the result that mental development will also become seriously and adversely affected. In fact, having regard to recent discoveries it is not too much to say that failing a regular supply of vitamins, there can be no proper physical or mental development.

The definitely known vitamins are described as Fat Soluble "A," Water Soluble "B," Water Soluble "C," and Fat Soluble "D."

Two of these vitamins are found in eggs in comparatively large quantities—Fat Soluble "A" Antiophthalmic and Water Soluble "B" Antineuritic. Fat Soluble "A" is a growth-promoting vitamin and prevents ophthalmia. Water Soluble "B" is growth-promoting and prevents beri-beri and polineuritis or rickets.

Eggs are one of the two foods which in themselves contain all the necessary elements for growth and proper development of the young and the replacing of waste tissue in adults.



### CODDLED EGGS

Have ready a saucepan containing boiling water. Carefully put in with a spoon the number of eggs desired covering them with water. Remove saucepan to back of range where water will not boil. Cook from six to eight minutes if liked "soft boiled"; forty to forty-five if liked "hard boiled."

Eggs perfectly cooked should be placed and kept in water at a uniform temperature of 175 degrees Fahrenheit. If eggs are coddled the whites will never become hard or horny as is the case where eggs are boiled.

### FRENCH POACHED EGGS

Put three pints of boiling water in saucepan and add one tablespoon vinegar and one-half tablespoon salt. Stir vigorously around and around edge of saucepan (using a wooden spoon held in nearly an upright position) while water is boiling vigorously.

As soon as well is formed in middle of water, slip in an egg. Remove to back of range and cook until white is set. Take out with a skimmer and trim. Repeat until the desired number of eggs is prepared.

### THE CARE OF EGGS IN THE HOME

Eggs are a very perishable food product and therefore care should be exercised as to the conditions under which they are held in the home, when a quantity sufficient to supply the family for some days is purchased. Eggs should be kept in the coolest, cleanest, driest place in the house where the temperature will remain steady.

Eggs will absorb odours of any kind very readily and should never be placed near fish, cheese, onions, or kerosene. If a case or crate containing eggs is placed in a cellar or basement the container should be placed either on a shelf or on supports of some kind which will ensure that the container is not actually touching the floor, in order to guard against mould or must.

### SCRAMBLED EGGS WITH TOMATO SAUCE

6 eggs	4 tablespoons butter
1½ cups tomatoes	1 slice onion
2 teaspoons sugar	½ teaspoon salt
	¼ teaspoon pepper.

Simmer tomatoes and sugar five minutes; fry butter and onion three minutes; remove onion, and add tomatoes, seasonings and eggs slightly beaten. Cook same as scrambled eggs. Serve with entire wheat bread or brown bread.

### EGG CUSTARDS, BREAD SAUCE

Beat three eggs slightly and add three-fourths cup milk. Season with one-half teaspoon salt, one-eighth teaspoon pepper, a few grains cayenne, and a few drops onion juice; then strain into buttered timbale moulds, set in pan of hot water (having water half surround moulds), and bake until firm. Remove to serving dish and pour around bread sauce. This recipe makes a sufficient quantity for six timbales.

### FRENCH OMELET

4 eggs	½ teaspoon salt
4 tablespoons milk	½ teaspoon pepper
	2 tablespoons butter.

Beat eggs slightly, just enough to blend yolks and whites, add the milk and seasonings. Put butter in hot omelet pan; when melted, turn in the mixture; as it cooks, pick up with a spatula until the whole is of creamy consistency. Place on hotter part of the range that it may brown quickly underneath. Fold and turn on hot platter.

### BUYING EGGS BY QUALITY

During the past decade the poultry industry of Canada has undergone a phenomenal growth until it stands at the present time as the fourth ranking agricultural industry of the nation. It is conceivable that if a business of this immense proportion is to continue in its normal trend, the product of the industry

must be marketed to the consumers of the country in such a manner as to leave no opportunity for the sale of inferior goods and the consequent falling off in consumption. Eggs, in this respect, differ materially from the majority of farm products. Some, such as flour, are sold under trade names and the purchaser learns to place his faith in one or more favourite brands. Other products, such as fruits, vegetables, and meat, are sold direct over the counter and the consumer is able to judge of the quality of goods he is receiving. With eggs it is different, for over the counter good and bad eggs look the same. The quality is hidden beneath the shell. In days gone by the housewife's only assurance that the eggs she was purchasing were fresh was the dealer's word. And the dealer, sincere though he might have been, himself very seldom actually determined the quality of the eggs. To overcome this state of affairs, to ensure the housewife that when she wanted fresh eggs she could get them, was the problem which faced the poultry industry of Canada.

It so happens that for a long time there has existed a method of actually determining the quality of eggs. It is based on the principle that light will pass through the shell and reveal the nature of the contents. The instrument used, known as a candling device, consists of a dark tube into which light is reflected. The tip of the egg is placed into the end of the tube and the light immediately reveals the entire contents of the egg. New eggs can be distinguished from old ones by the size of the little air sac or cell which is found at the top of the egg. Quality can be determined by the firmness and comparative invisibility of the yolk. The presence of undesirable qualities such as off-coloured yolks and watery whites, as well as foreign matter such as blood spots or clots, can also be detected. Here, then, was the obvious tool to be used in selling the produce of this great agricultural industry to the consumers of the nation in such a manner that they could be sure of the quality of the eggs they were buying.

For some little time Canada has insisted on the uniform grading of eggs for the export trade, realizing that by so doing it would be possible to build up confidence and a strong market in other countries. Four grades of fresh eggs were established, the grading based on size as well as on quality. The grades were: "Specials," "Extras," "Firsts," and "Seconds." All eggs for export which were graded and passed had a maple leaf stamped on the end of the case, and soon there sprang up in other countries an active demand for the graded eggs which came under this maple leaf emblem.

### NO NEED TO GET BAD EGGS NOW

Having placed the export trade of eggs on this solid footing, the next step was to give a graded product to the consumers of Canada, to ensure them of the same satisfaction in purchasing eggs at home as a foreign importer could receive purchasing eggs here. Accordingly in July, 1923, regulations were introduced requiring that eggs sold to the domestic trade be uniformly graded. The effect has been widespread and highly gratifying. A housewife, going to the store to buy eggs, has the different grades placed before her and can purchase according to her own estimation of values. The result is that she knows what she is getting and gets what she buys. The occasional bad egg, which in times gone by invariably made its appearance, has disappeared. As a result the consumption of eggs has increased until at the present time the people of Canada are eating almost three-quarters of an egg per capita per day. This amount is still low, but with the steady progress being made should increase considerably within the course of a few years. With these facts in mind, with the knowledge that it is possible to purchase eggs according to quality and weight, the wise consumer will always insist on graded eggs.



Following are the descriptions of the various grades of eggs:—

- “SPECIALS.”—The very cream of Canadian eggs, produced largely on the specialized commercial plants of the country. They average in weight 25 ounces to the dozen, are absolutely fresh and of the highest quality.
- “EXTRAS.”—These are slightly smaller than “Specials,” weighing at least 24 ounces to the dozen. They are a first-class product and form the bulk of the demand for high-quality eggs.
- “PULLET EXTRAS.”—Of the same quality as “Extras,” but smaller.
- “FIRSTS.”—These eggs are not of the same high quality as “Extras” and are slightly smaller. They can be used for cooking or can be served alone or in combination.
- “SECONDS.”—This class constitutes all eggs which are fit for food but which are not found in the other classes. They may be used in cooking, but are not sufficiently uniform in quality or flavour to be used alone or in mild-flavoured dishes.

### SOME INTERESTING FACTS ABOUT THE EGG

The egg is the only animal food which comes to us wrapped in a natural parcel.

The mineral elements contained in eggs assist in keeping the blood in proper solution, prevent clotting and at the same time enrich the blood.

There are absolutely no substitutes for eggs, no matter what may be said to the contrary. In health and sickness eggs are indispensable, and with fruit and vegetables they supply vital elements to the human system that can be obtained from no other foods in sufficient quantities.

It is well known that certain diseases prevail alarmingly where eggs are lacking in the diet.

Dr. McCollum, a prominent scientist, has expressed the belief that the real reason why the men and women of China and Japan are small in stature is that their diet has been faulty, lacking mainly in eggs and milk. In fact, he believes that differences both in body and mental equipment are differences due to diet rather than race. The use of eggs in a limited way by the Chinese, Dr. McCollum says, has saved them from extinction; but they use no milk and not enough eggs.

In contrast the people of Europe and America are, comparatively speaking, liberal users of both eggs and milk. They are the largest people in the world, they have the lowest death rate, the longest span of life, and accomplish the most in every line of activity.

Dr. McCollum says: “Tuberculosis is not primarily due to faulty diet, but I will stake my reputation that lack of sanitation and of ventilation have been entirely over-estimated as predisposing individuals to tuberculosis; faulty diet is the factor predisposing individuals to that disease.”

The per capita consumption of eggs in Canada, while it is increasing, is less than approximately three-quarters of an egg a day, and taking into consideration our small children, it is probably less. At least one egg a day per capita should be added. We know how beneficial eggs are in sickness; then why not use them as a *protection against sickness*, against epidemics, and to promote the physical and mental development of our children.

It should appeal to Canadian mothers to consider this matter seriously with a view to safeguarding the proper growth, mental development and general health of our children, and the well-being of Canadians generally.